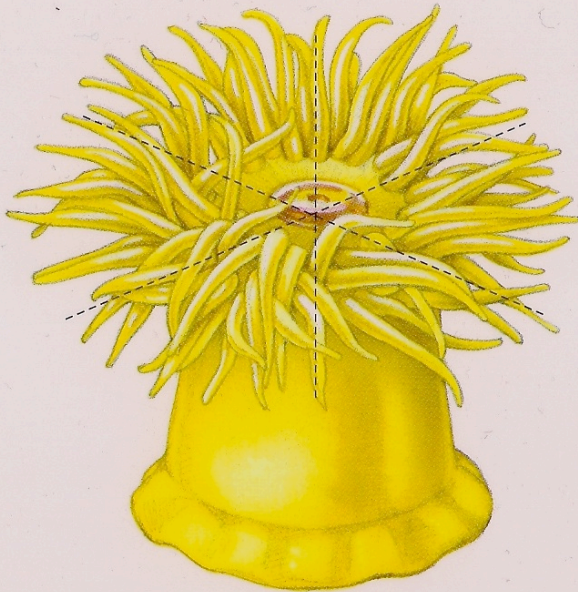


Porifera

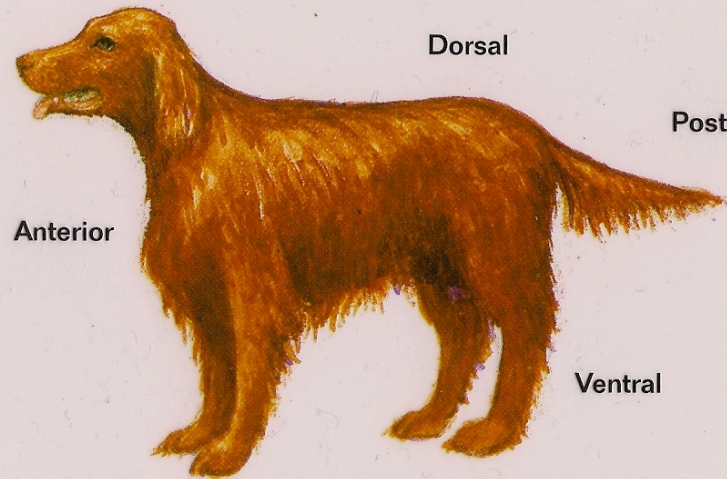
Sponges



Radial symmetry



Bilateral symmetry

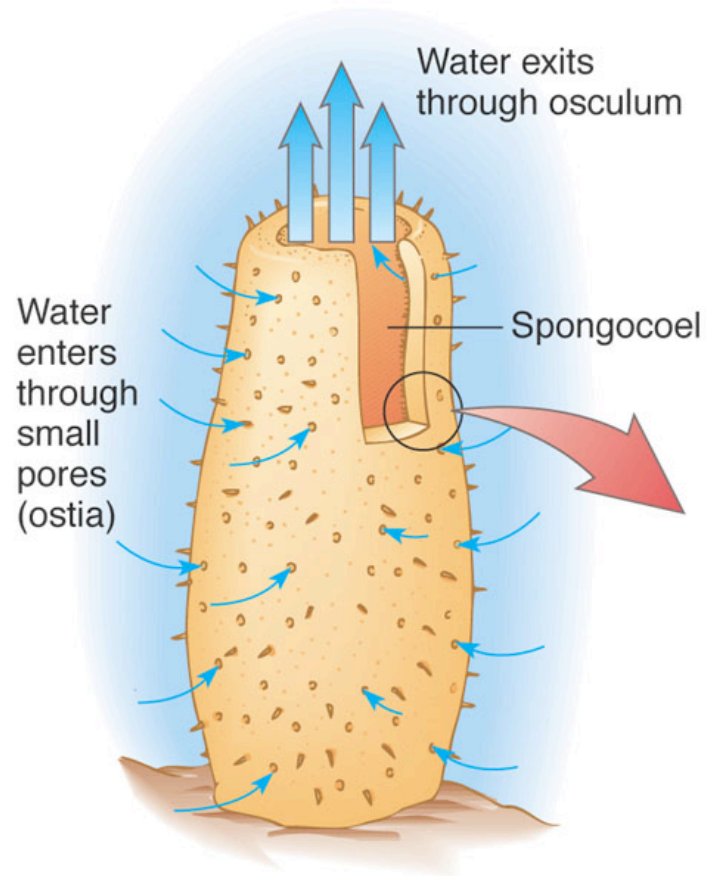


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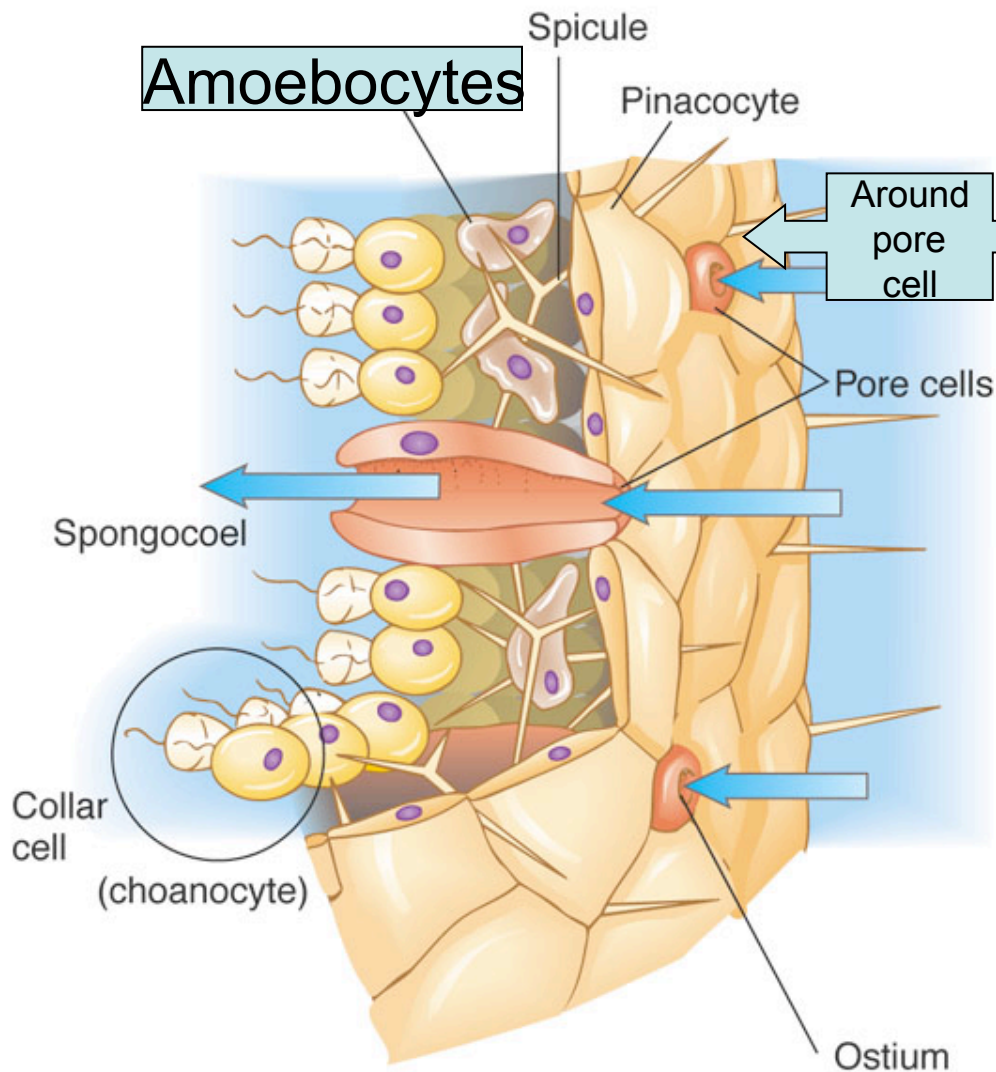
Porifera

- No tissues, organs
- Asymmetric
- Sessile
- Filter-feeders

Structure

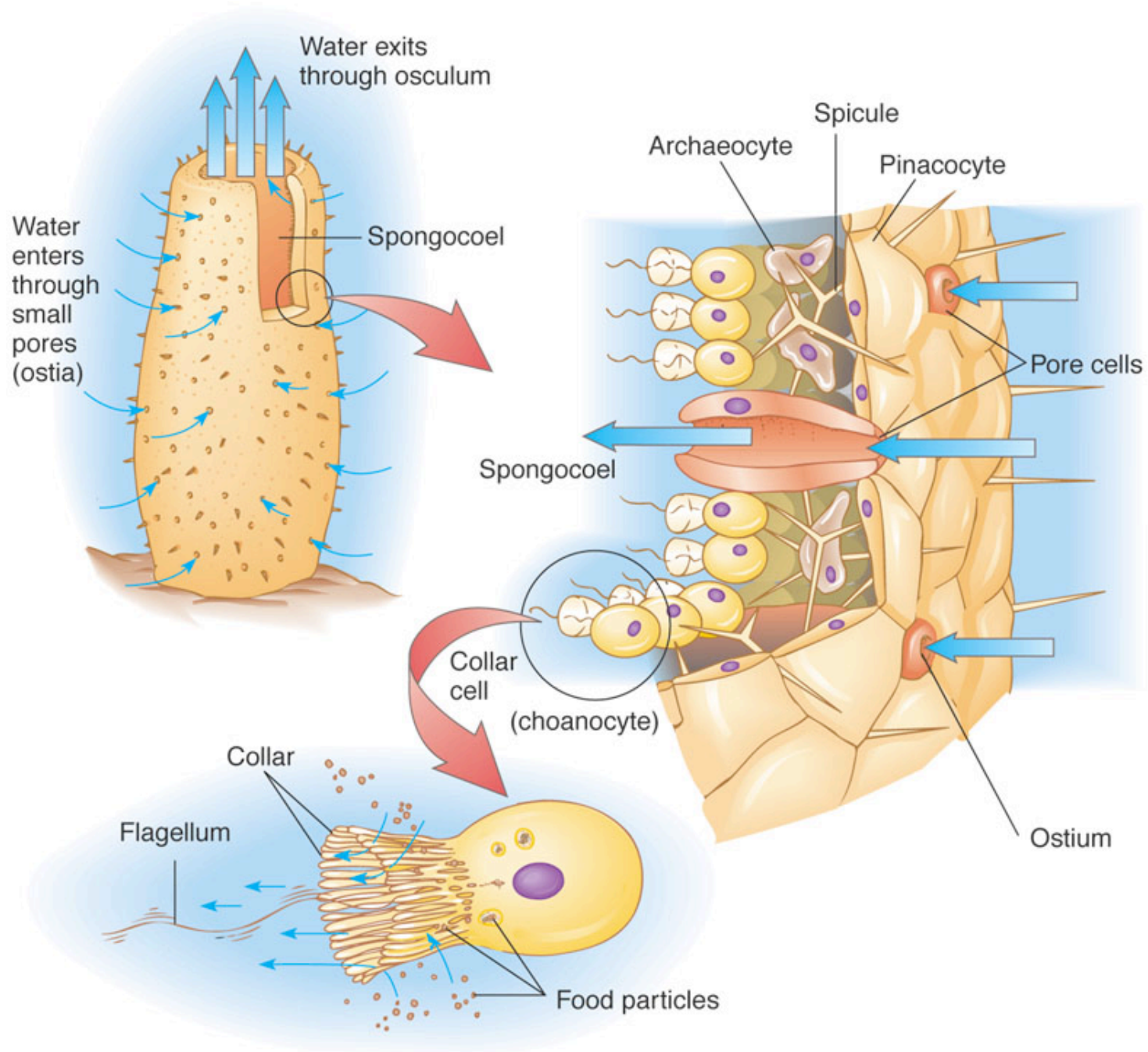


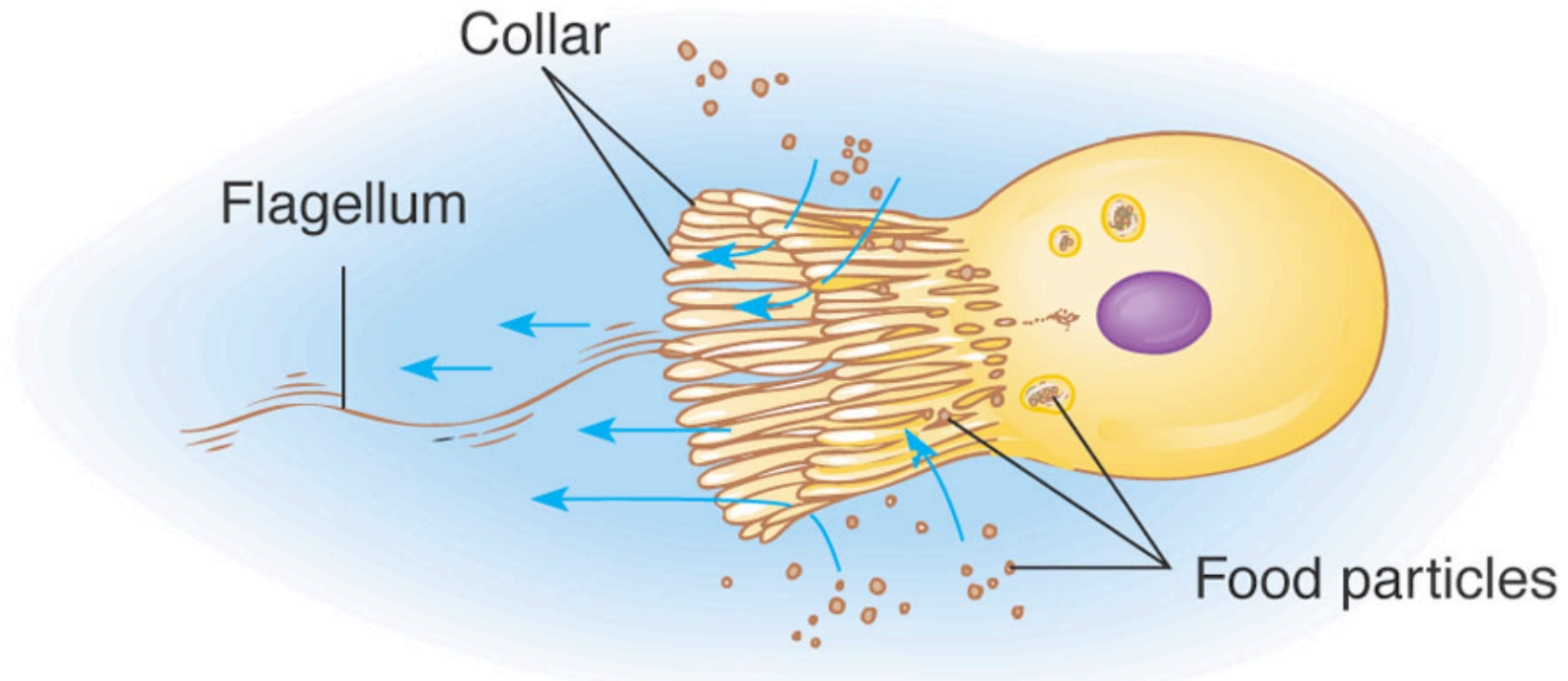
- Ostia/Pore cell: brings water and food in
- Osculum: Large opening, water and waste expelled



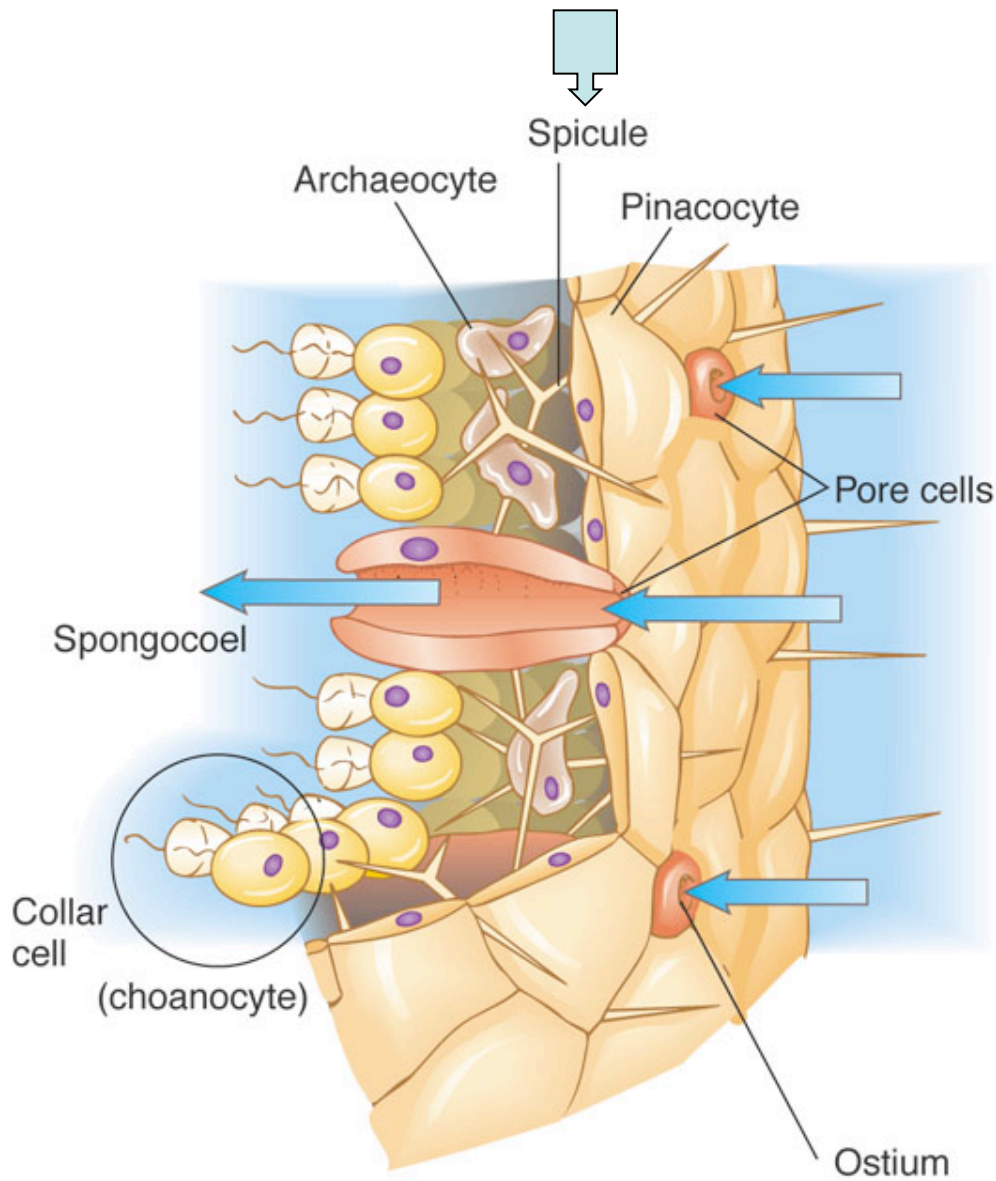
Epithelial cell:
contract in response
to touch, chemicals

- Amoebocytes:
- between 2 layers of cells
- Carry nutrients
- Form eggs and sperm
- Help make spicules





Collar cell (choanocyte): line inside, flagellum to draw in water



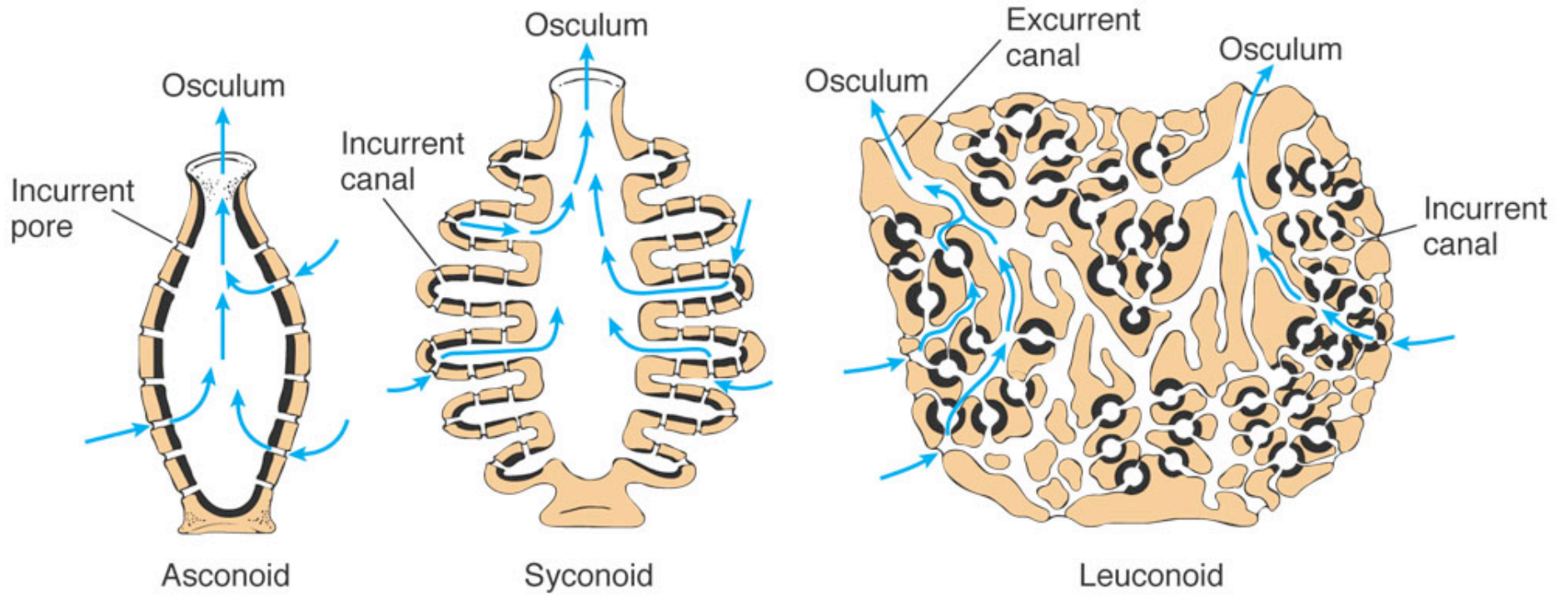
Spicules:

- Hard support system
- Small, needlelike, between cell layers
- Calcium carbonate or silica
- Hard to eat

Spongin: Protein fibers for support (bath sponges)

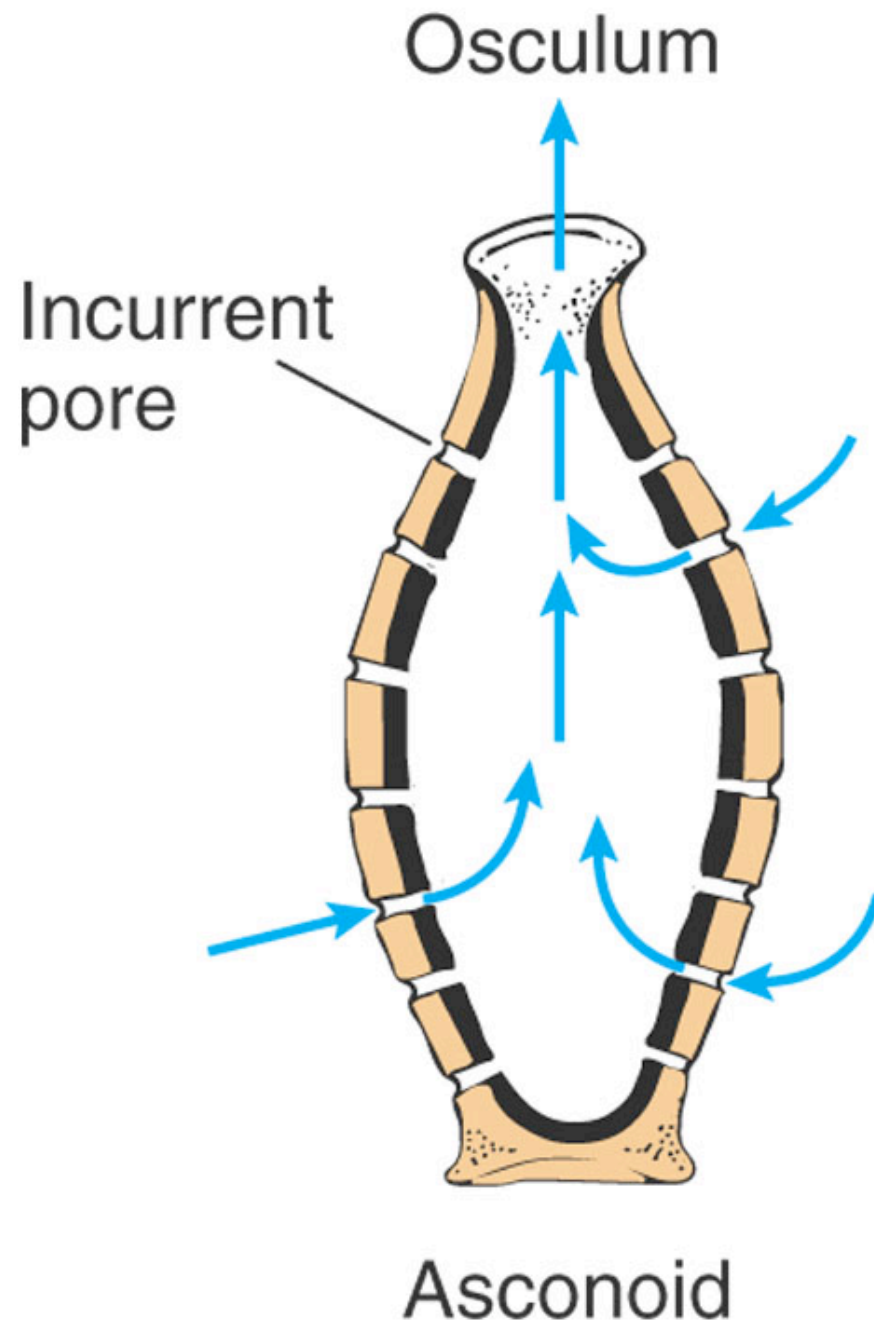
Bath sponge, no spicules

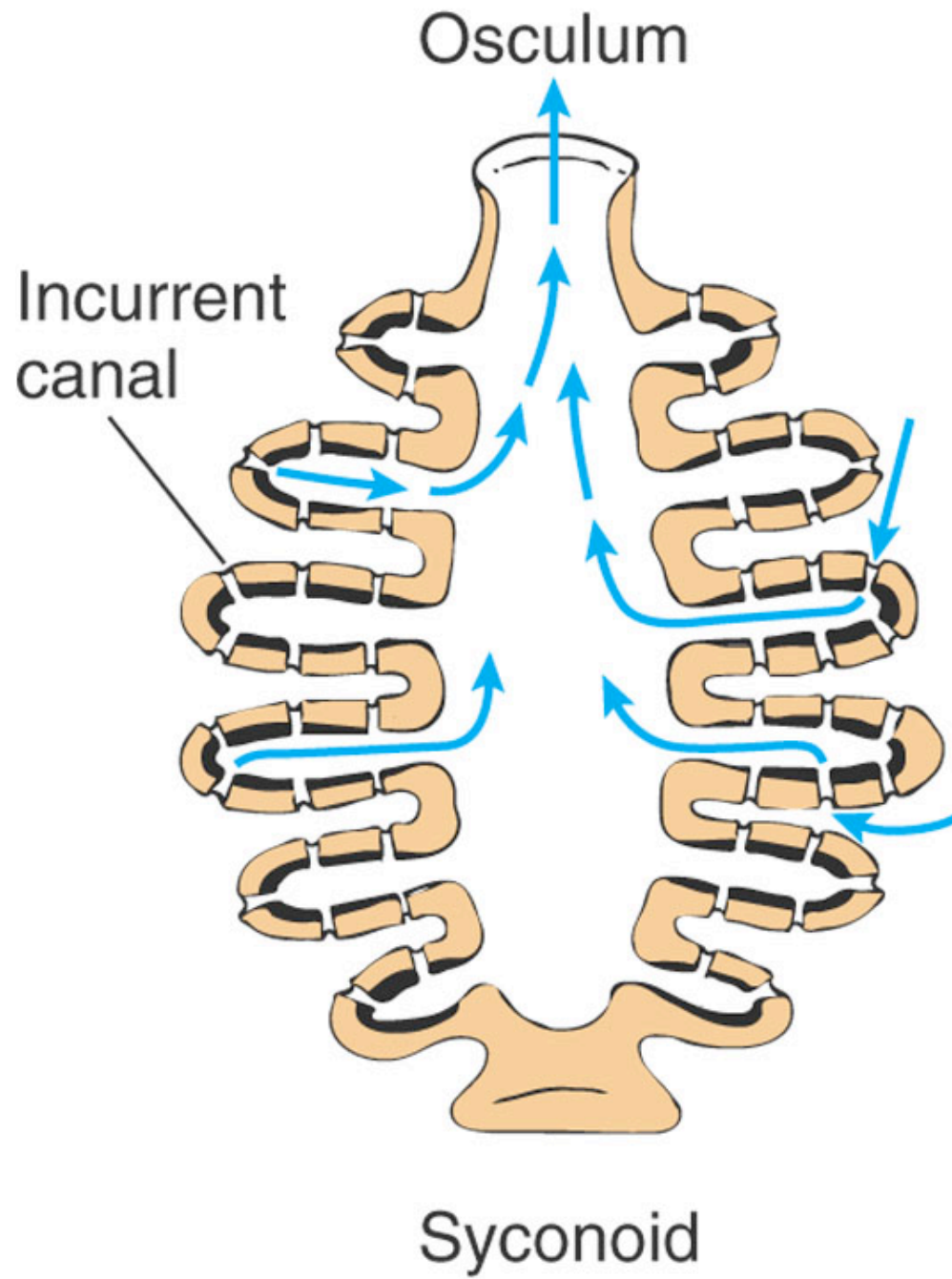


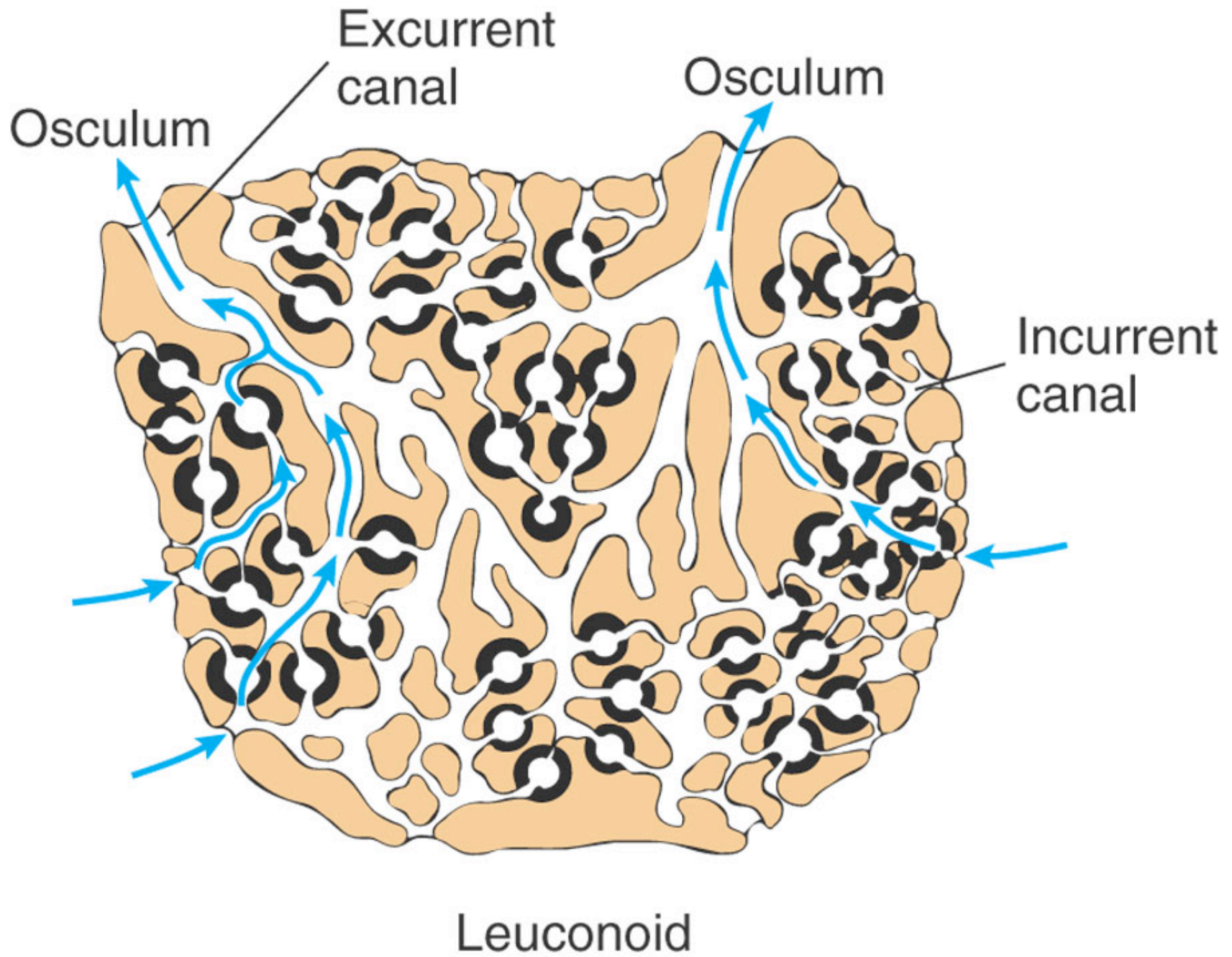


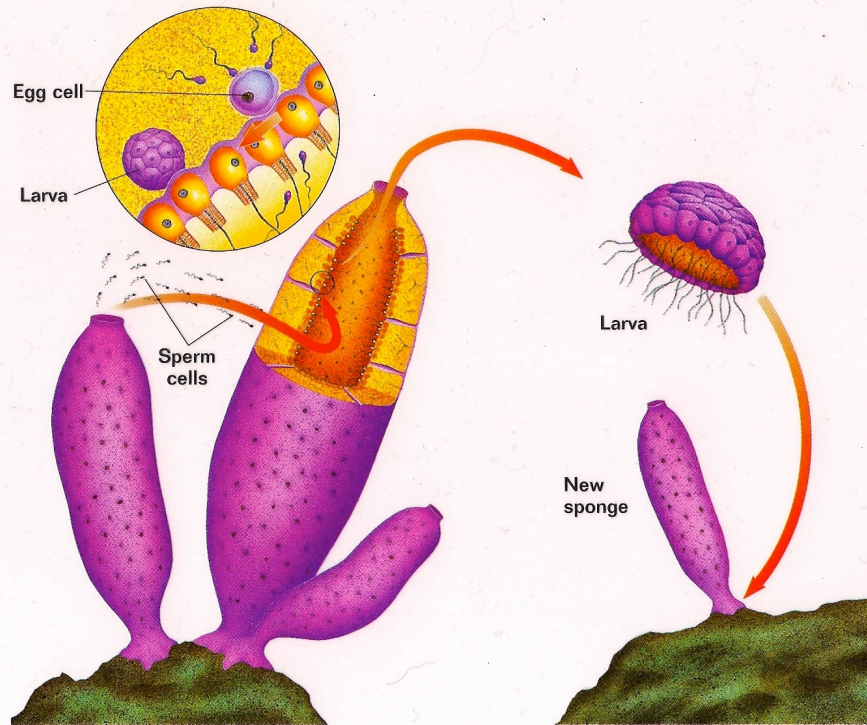
© 2006 Brooks/Cole - Thomson

Fig. 8-2, p.164







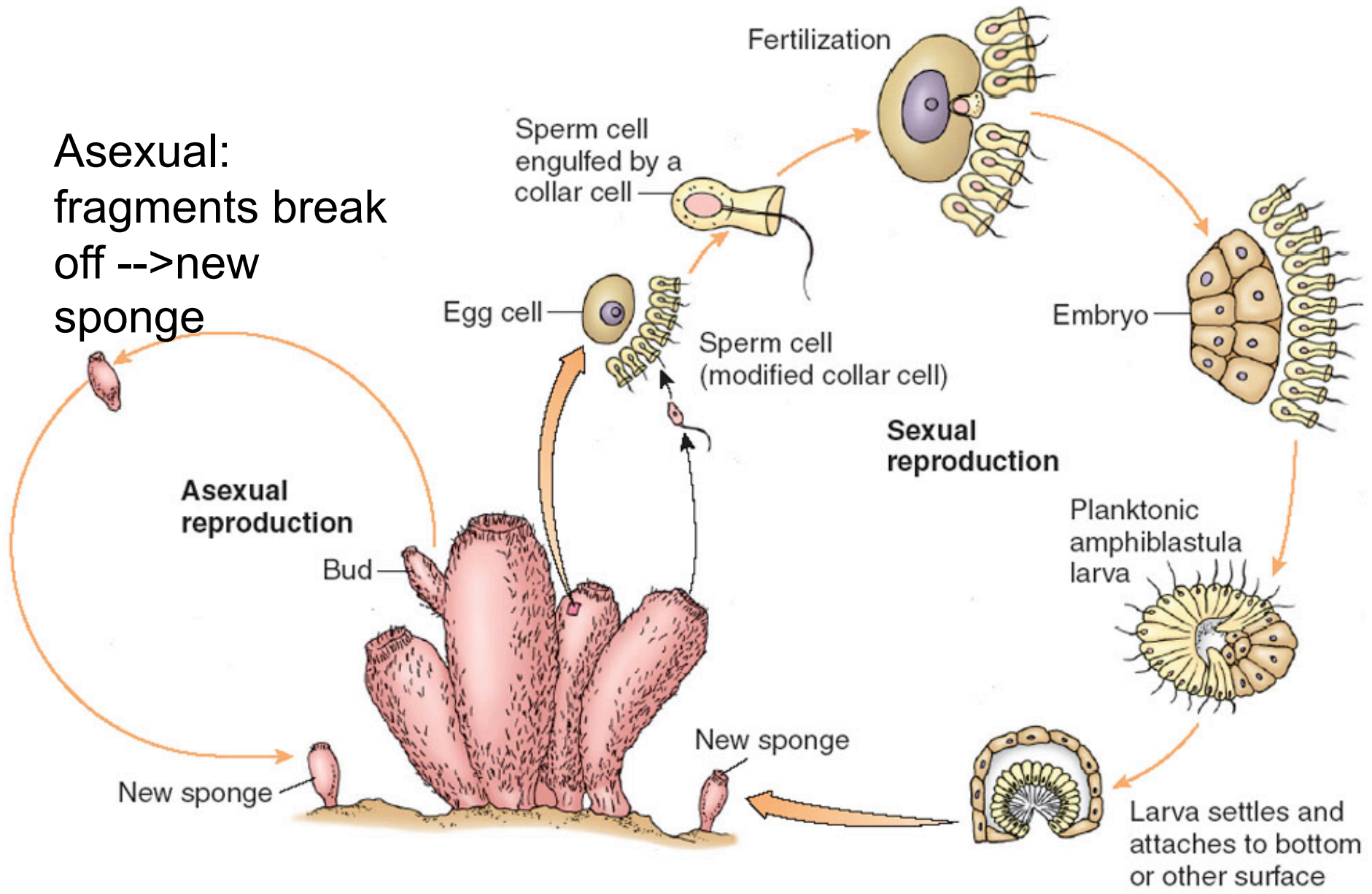


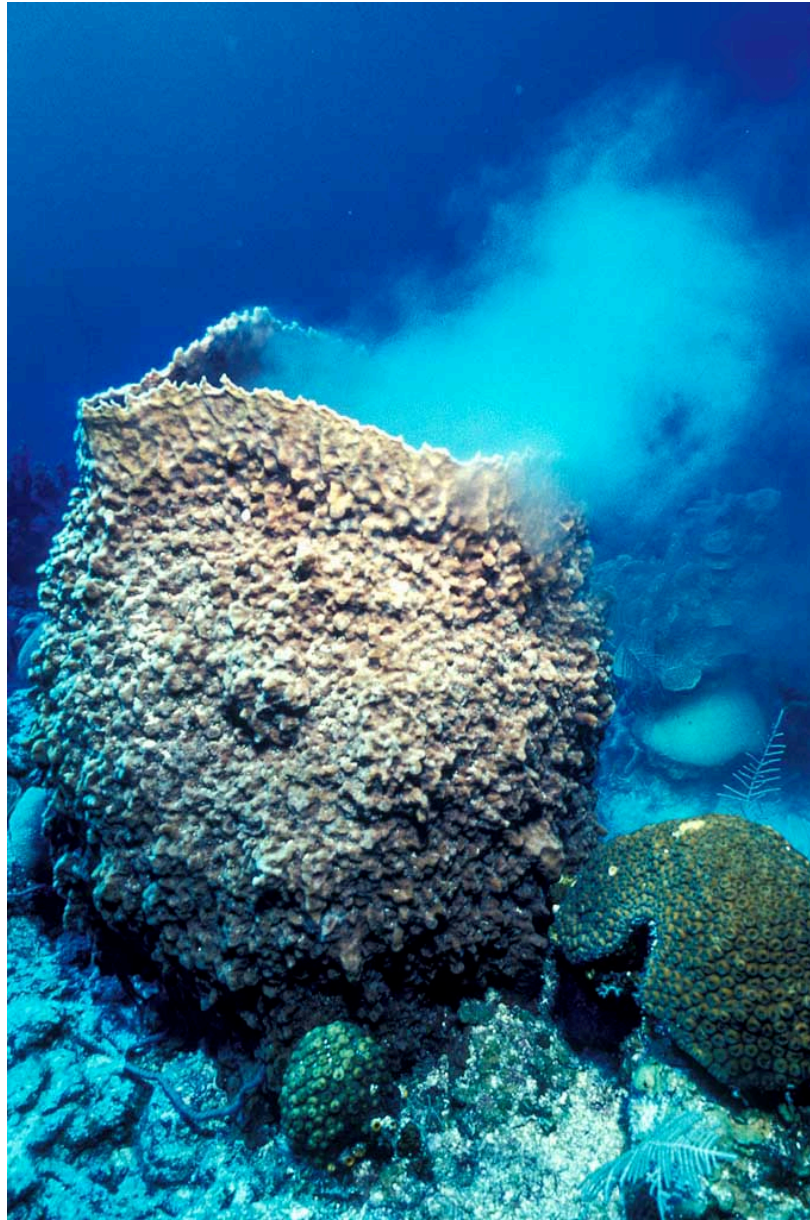
Sexual reproduction: most hermaphrodites

Most internal fertilization, release sperm, eggs inside

Free-swimming, flagellated larvae

Asexual:
fragments break
off --> new
sponge





Credit: © Marty Snyderman/Visuals Unlimited

Spawning Basket Sponge (*Xestospongia nuta*).

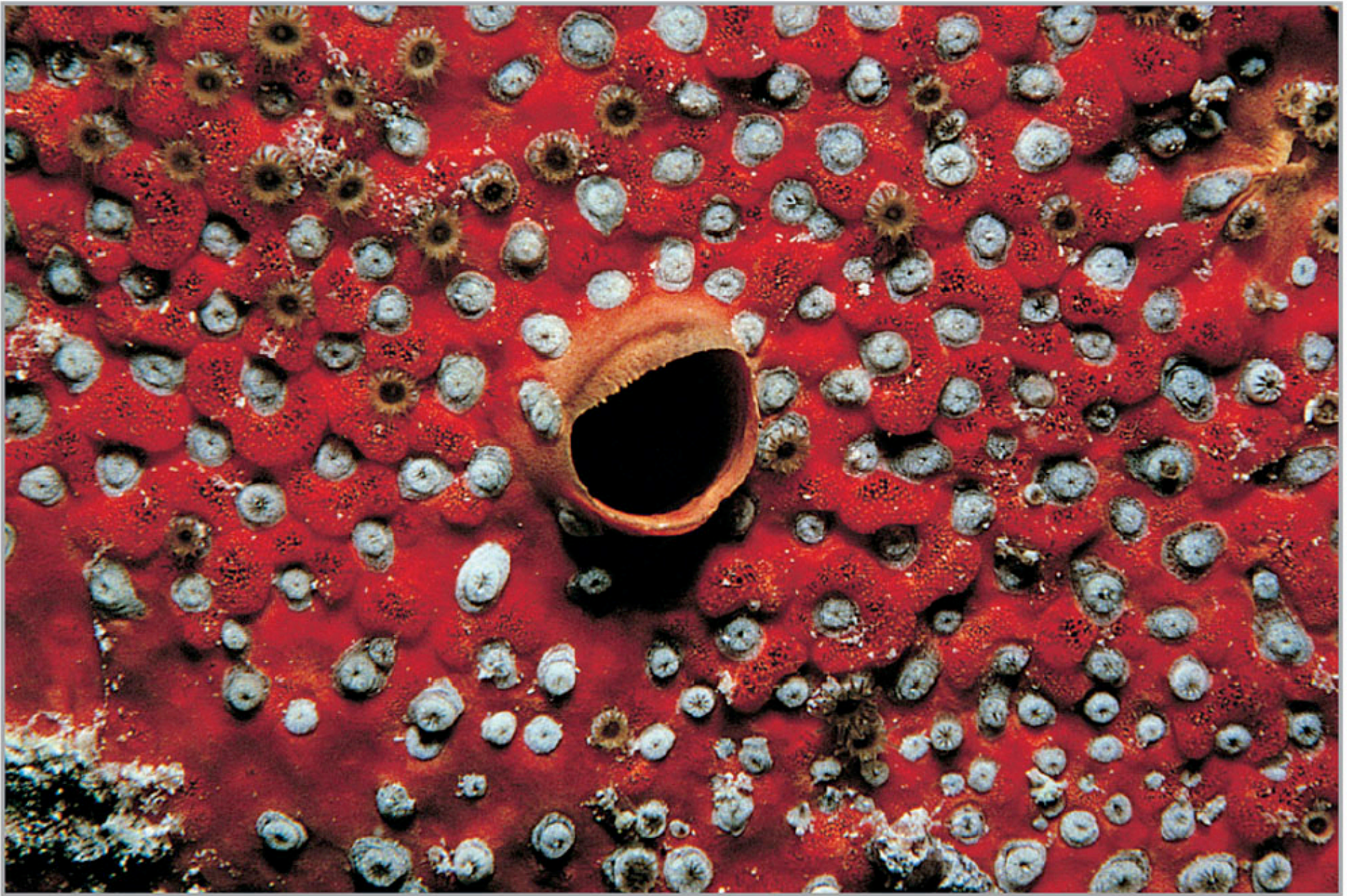


Yellow Boring Sponge



Yellow boring sponge (36" H, 20" W)





Boring sponge



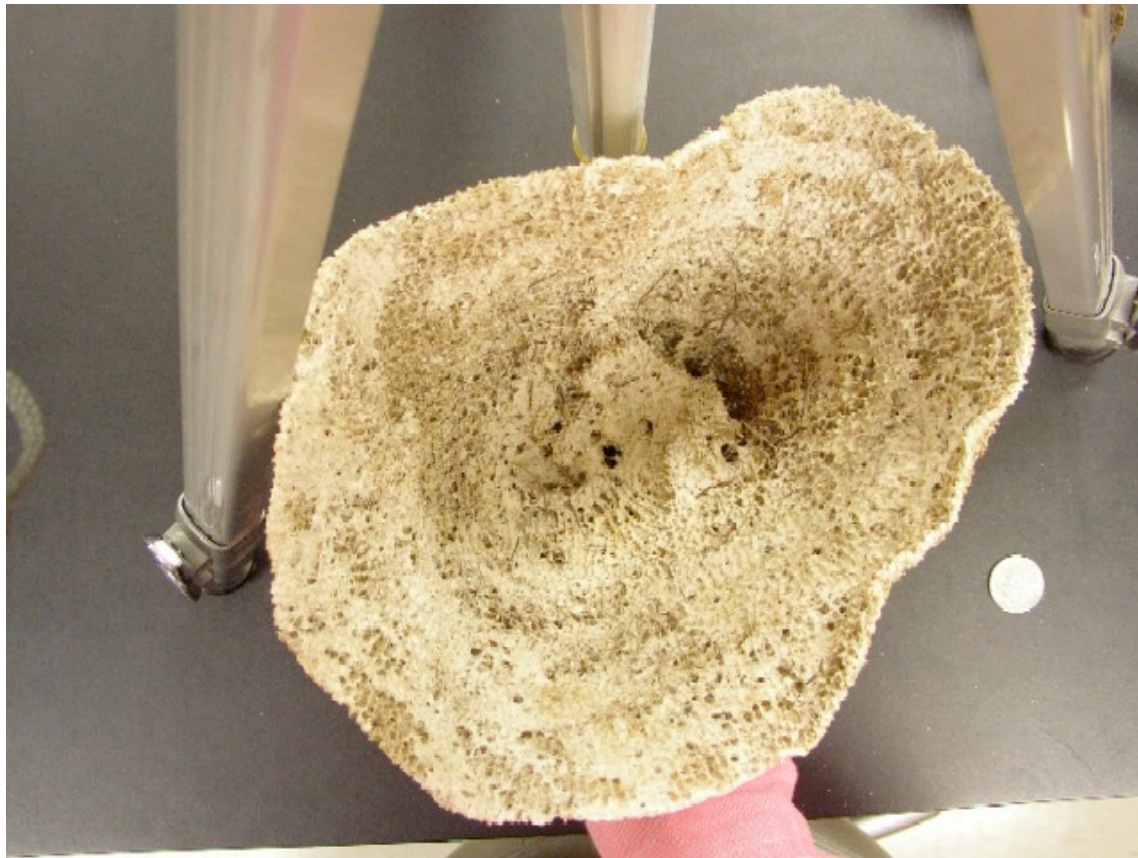
Finger Sponge



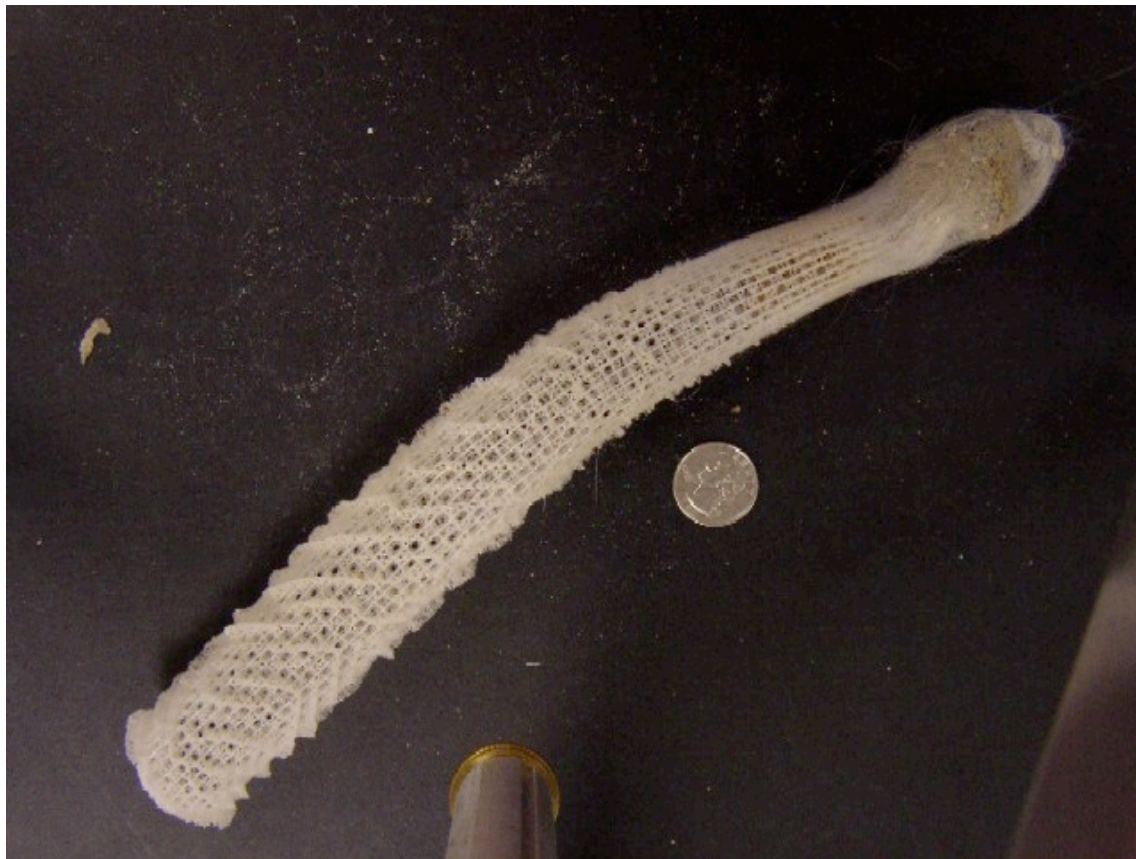
Vase Sponge



Vase Sponge



Glass Sponge, silica spicules





Purple encrusting sponge

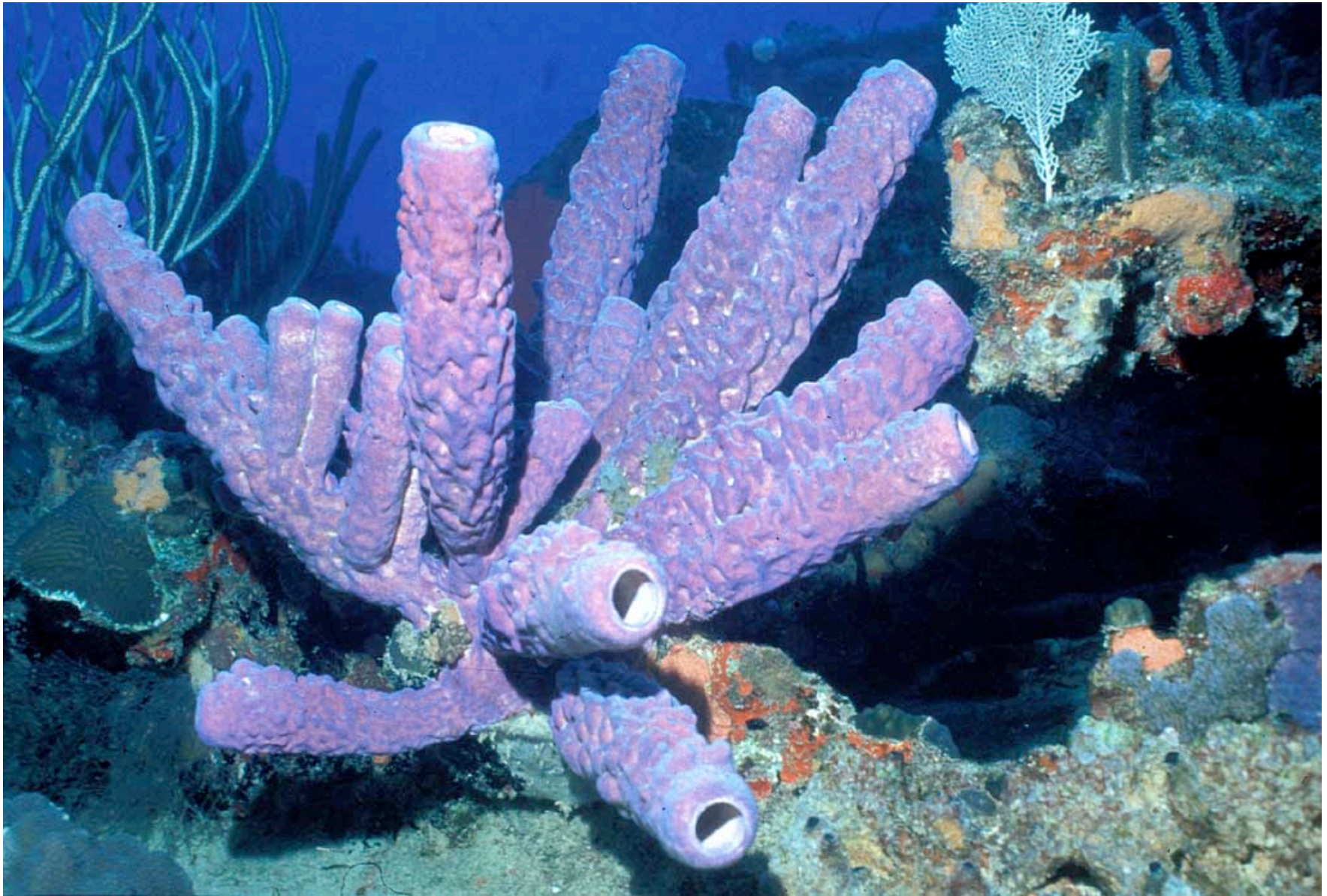


Pecten sponge on a scallop



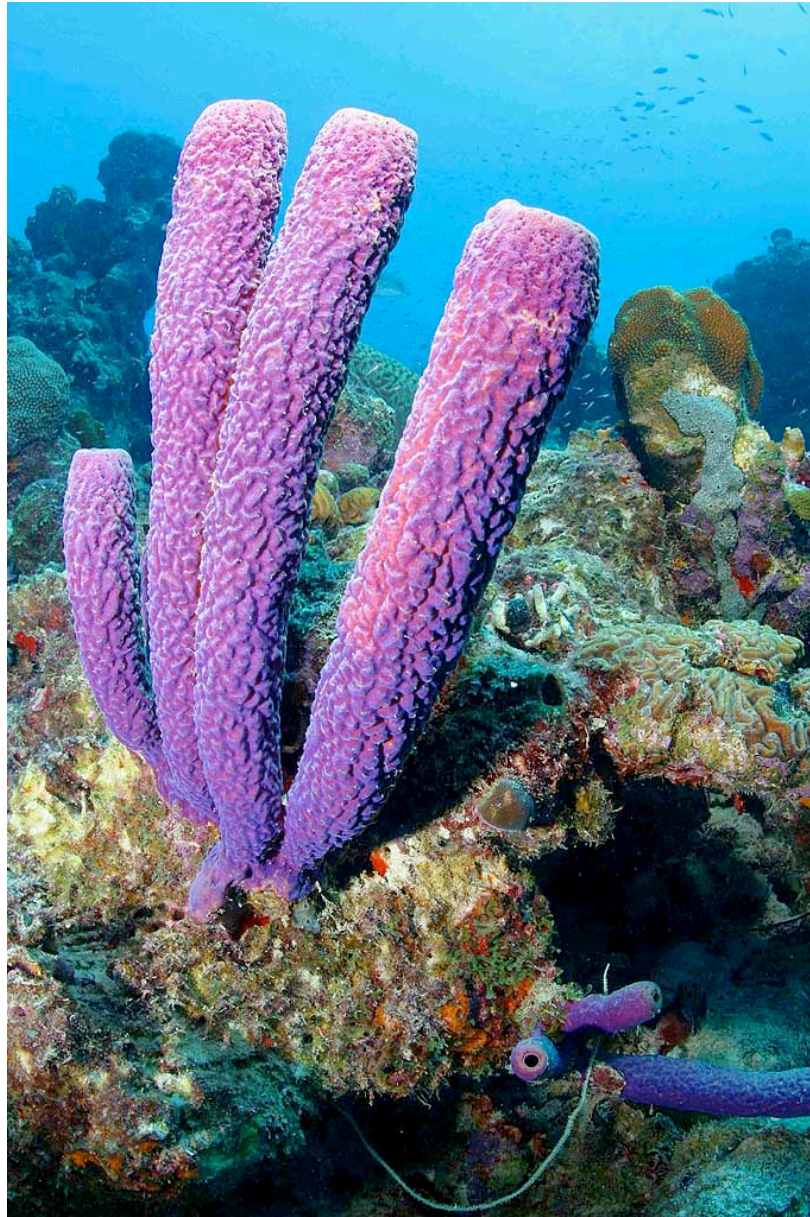
Tubular sponge





Credit: © Hal Beral/Visuals Unlimited

Purple Tube Sponge.



Credit: © James Watt/Visuals Unlimited

Sponge on a coral reef.

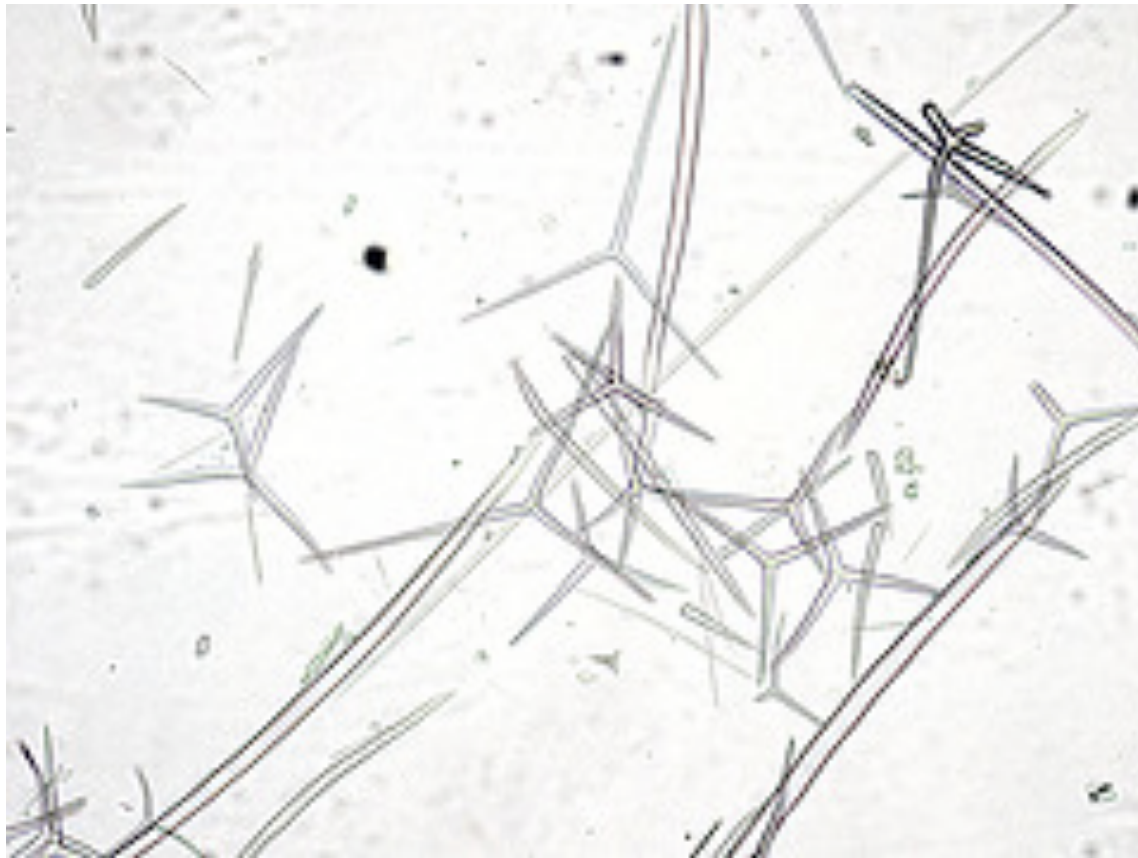
Grantia Simplest sponges



Grantia spicules



Grantia spicules



What are they made of?

What are they made of?

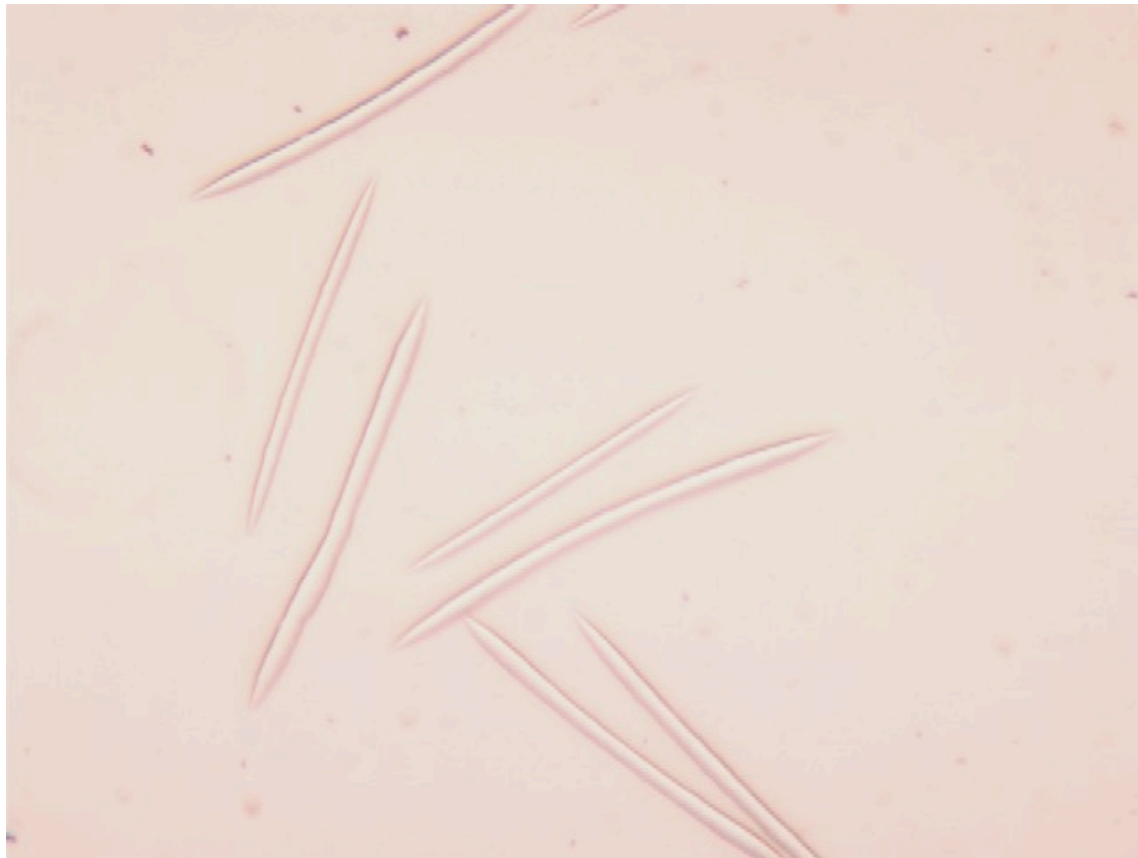
- Calcium carbonate

Sponges made with spongin
and some with silica spicules

Spongilla



Spongilla spicules



Bath sponge, no spicules



